To:

Panger, Melissa [Panger.Melissa@epa.gov]; Anderson, Brian [Anderson.Brian@epa.gov]; Nancy Golden [nancy_golden@fws.gov]; Sims, Diann [Sims.Diann@epa.gov]; Becker, Jonathan [Becker.Jonathan@epa.gov]; Paisley-Jones, Claire [Paisley-Jones.Claire@epa.gov]; Connolly, Jennifer [Connolly, Jennifer@epa.gov]; Lennartz, Steven [Lennartz.Steven@epa.gov]; Peck, Charles [Peck.Charles@epa.gov]; Suarez, Mark [Suarez.Mark@epa.gov]; Ryan DeWitt [ryan.dewitt@noaa.gov]; jennifer thompson@fws.gov; Keith Paul [keith_paul@fws.gov]; Patrice Ashfield [patrice ashfield@fws.gov]; Rossmeisl, Colleen [Rossmeisl.Colleen@epa.gov]; Patrice Ashfield [patrice ashfield@fws.gov]; Panger, Melissa [Panger.Melissa@epa.gov]; Anderson, Brian [Anderson.Brian@epa.gov]; Nancy Golden [nancy_golden@fws.gov]; Sims, Diann [Sims.Diann@epa.gov]; Becker, Jonathan [Becker.Jonathan@epa.gov]; Myers, Clayton - ARS [clayton.myers@ars.usda.gov]; Paisley-Jones, Claire [Paisley-Jones.Claire@epa.gov]; David Baldwin [david.baldwin@noaa.gov]; Hill2, Elizabeth - ARS [elizabeth.hill2@ars.usda.gov]; Connolly, Jennifer [Connolly, Jennifer@epa.gov]; Lennartz, Steven [Lennartz.Steven@epa.gov]; Peck, Charles [Peck.Charles@epa.gov]; Suarez, Mark [Suarez.Mark@epa.gov]; Ryan DeWitt [ryan.dewitt@noaa.gov]; Thomas Hooper - NOAA Federal [thomas.hooper@noaa.gov]; Kathryn Bissell [kathryn bissell@fws.gov]; jennifer thompson@fws.gov; Garber, Kristina [Garber, Kristina@epa.gov]; Tony Hawkes [tony.hawkes@noaa.gov]; Andrew Raabe [andrew_raabe@fws.gov]; Sara Pollack [sara_pollack@fws.gov]; Leona Laniawe [leona_laniawe@fws.gov]; Keith Paul [keith_paul@fws.gov]; Burk, Rosemary [rosemary_burk@fws.gov]; Hill2, Elizabeth - OCE [Elizabeth.Hill2@oce.usda.gov]

Location: DCRoomPYS7100/Potomac-Yard-One

Start: 12/4/2018 7:00:00 PM **End**: 12/4/2018 8:00:00 PM

Show Time As: Busy

Recurrence: (none)

every Tuesday from 2:00 PM to 3:00 PM

Hi all -

As Brian indicated in his email, a new draft agenda was discussed by the managers last week for the upcoming briefing. That agenda is below and we can talk about it this afternoon – time allotments may need to shift depending on where certain material will be covered.

Thank you for all the comments on the presentation! There are a lot of different comments and we have created some new maps as well (as have the other agencies)... I am trying to address as much as I can and pull them together in one slide deck, roughly following the outline below. For the meeting today, we would like to at least finalize (or nearly finalize) the slides where we have some interagency agreement on methods.

Thanks – Colleen

Proposed agenda for December 10 briefing:

- Introduction: 5 min (Brian and Patrice)
 - Purpose: We are going to present progress on the action area development related to agricultural uses of malathion.

Deliberative Process / Ex. 5

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o Each agency will give their perspective on the pros and cons of the methods at the end of the presentation. Presentation – (EPA and FWS). 30 min Perspectives on pros and cons of the methodology and recommendations o EPA: 10 minutes o FWS: 10 minutes o NMFS: 10 minutes o USDA: 10 minutes Discussion: 30 minutes Wrap up and next steps: 15 minutes → Join Skype Meeting Trouble Joining? Try Skype Web App Join by phone Toll number: Conference Line/Code / Ex. 6 English (United States) Find a local number Conference ID: Conference Line/Code/Ex. 6 Forgot your dial-in PIN? | Help

To:

Panger, Melissa [Panger.Melissa@epa.gov]; Patrice Ashfield [patrice_ashfield@fws.gov]; Anderson, Brian [Anderson.Brian@epa.gov]; Nancy Golden [nancy_golden@fws.gov]; Sims, Diann [Sims.Diann@epa.gov]; Becker, Jonathan [Becker.Jonathan@epa.gov]; Paisley-Jones, Claire [Paisley-Jones.Claire@epa.gov]; Connolly, Jennifer [Connolly.Jennifer@epa.gov]; Lennartz, Steven [Lennartz.Steven@epa.gov]; Peck, Charles [Peck.Charles@epa.gov]; Suarez, Mark [Suarez.Mark@epa.gov]; Ryan DeWitt [ryan.dewitt@noaa.gov]; jennifer_thompson@fws.gov; Keith Paul [keith paul@fws.gov]; Rossmeisl, Colleen [Rossmeisl.Colleen@epa.gov]; Panger, Melissa [Panger.Melissa@epa.gov]; Patrice Ashfield [patrice ashfield@fws.gov]; Anderson, Brian [Anderson.Brian@epa.gov]; Nancy Golden [nancy_golden@fws.gov]; Sims, Diann [Sims.Diann@epa.gov]; Becker, Jonathan [Becker.Jonathan@epa.gov]; Myers, Clayton - ARS [clayton.myers@ars.usda.gov]; Paisley-Jones, Claire [Paisley-Jones.Claire@epa.gov]; David Baldwin [david.baldwin@noaa.gov]; Hill2, Elizabeth - ARS [elizabeth.hill2@ars.usda.gov]; Connolly, Jennifer [Connolly, Jennifer@epa.gov]; Lennartz, Steven [Lennartz.Steven@epa.gov]; Peck, Charles [Peck.Charles@epa.gov]; Suarez, Mark [Suarez.Mark@epa.gov]; Ryan DeWitt [ryan.dewitt@noaa.gov]; Thomas Hooper - NOAA Federal [thomas.hooper@noaa.gov]; Kathryn Bissell [kathryn bissell@fws.gov]; jennifer thompson@fws.gov; Garber, Kristina [Garber, Kristina@epa.gov]; Tony Hawkes [tony.hawkes@noaa.gov]; Andrew Raabe [andrew_raabe@fws.gov]; Sara Pollack [sara_pollack@fws.gov]; Leona Laniawe [leona_laniawe@fws.gov]; Keith Paul [keith_paul@fws.gov]; Burk, Rosemary [rosemary_burk@fws.gov]; Hill2, Elizabeth - OCE [Elizabeth.Hill2@oce.usda.gov]; Perry, Tracy [Perry.Tracy@epa.gov]

Subject: Canceled: ESA Interagency Usage Data Methodology Workgroup

Location: DCRoomPYS7100/Potomac-Yard-One

Start: 2/12/2019 7:00:00 PM **End**: 2/12/2019 8:00:00 PM

Show Time As: Free

Importance: High

Recurrence: (none)

every Tuesday from 2:00 PM to 3:00 PM

For EPA folks, you are getting this email twice (sorry). I sent late yesterday but it got kicked back to me for everyone outside of EPA due to attachment #2 being too large. I have removed that attachment and will work on getting that to outside folks shortly (will probably put on SharePoint and send a link).

Thanks! Colleen

Hi all -

Proposed agenda for tomorrow's meeting:

Discuss two attached documents:

- Summary of proposed methodology for the AA based on our discussions to date, including areas where
 decisions still need to be made. This is based largely on the meeting minutes I sent around last week and other
 previous meetings.
- 2) Census crop presence/absence table by County (if folks have time to review, EPA can provide any clarifications on how to use table).

We would also like to discuss the need for redacted mosquito control usage data – we had previously discussed obtaining that data, but there may be some concerns from the registrant in being able to release the data. It would be good to discuss what form we may want this data in, or if it is needed.

Please let us know if folks will be available to meet at 2 pm and if there are additional agenda items.

Thanks!	
Colleen	
- Lain Clama Maatina	
→ Join Skype Meeting	
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· ·	
Toll number: Conference Line/Code / Ex. 6	English (United States)
Find a local number	
Conference ID: Conference Line Code : Ex. 9	
Forgot your dial-in PIN? Help	

From: Rossmeisl, Colleen [Rossmeisl.Colleen@epa.gov]

Sent: 12/4/2018 11:22:32 AM

To: Anderson, Brian [Anderson.Brian@epa.gov]; Panger, Melissa [Panger.Melissa@epa.gov]; Connolly, Jennifer

[Connolly.Jennifer@epa.gov]; Kyle, Lee [Kyle.Lee@epa.gov]; Becker, Jonathan [Becker.Jonathan@epa.gov]; Paisley-

Jones, Claire [Paisley-Jones.Claire@epa.gov]; Sims, Diann [Sims.Diann@epa.gov]; Perry, Tracy

[Perry.Tracy@epa.gov]; Garber, Kristina [Garber.Kristina@epa.gov]; Peck, Charles [Peck.Charles@epa.gov]; Lennartz,

Steven [Lennartz.Steven@epa.gov]; Suarez, Mark [Suarez.Mark@epa.gov]

Subject: EPA ESA Usage Workgroup

Location: DCRoomPYS7771D/Potomac-Yard-One

Start: 12/4/2018 2:15:00 PM **End**: 12/4/2018 3:00:00 PM

Show Time As: Tentative

Recurrence: Weekly

every Tuesday from 9:00 AM to 10:00 AM

Agenda for meeting today:

Moving start time to 9:15 am today

- Discuss slide deck and thoughts for briefing next week. I have received comments on several slide decks and
 Steve has created new maps, so it may be easier to discuss then send around. We also received new slide edits
 from NMFS last night. Based on discussions with EPA/Services management, a proposed agenda for the briefing
 was created last week (see below). However, we have not yet received feedback on this agenda or comments on
 slides from FWS.
- Other items?

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- Introduction: 5 min (Brian and Patrice)
 - Purpose: We are going to present progress on the action area development related to agricultural uses of malathion.

Deliberative Process / Ex. 5

- Each agency will give their perspective on the pros and cons of the methods at the end of the presentation.
- Presentation (EPA and FWS). 30 min
- Perspectives on pros and cons of the methodology and recommendations
 - EPA: 10 minutes
 FWS: 10 minutes
 NMFS: 10 minutes
 USDA: 10 minutes
- Discussion: 30 minutes
- Wrap up and next steps: 15 minutes

→ <u>Join Sky</u>	pe Meeting	
Trouble Joinii	ng? <u>Try Skype Web App</u>	
Join by phone	e	
Toll number:	Conference Line/Code / Ex. 6	English (United States)
Find a local numb	<u>per</u>	
Conference ID:	Inference LineCose / Ex. 8	
Forgot your dial-i	in PIN? Help	

From:

Sent:

To:

Panger, Melissa [Panger.Melissa@epa.gov]

Garber, Kristina [Garber.Kristina@epa.gov]

6/13/2018 10:52:51 AM

```
RE: Invitation: Mosquito adulticide kickoff meting @ Wed Jun 13, 2018 3pm - 4pm (EDT) (panger.melissa@epa.gov)
Subject:
Thank YOU... I hate to add another meeting to your schedule!
----Original Message----
From: Garber, Kristina
Sent: Wednesday, June 13, 2018 6:52 AM
To: Panger, Melissa <Panger.Melissa@epa.gov>
Subject: Re: Invitation: Mosquito adulticide kickoff meting @ Wed Jun 13, 2018 3pm - 4pm (EDT)
(panger.melissa@epa.gov)
Thanks
> On Jun 13, 2018, at 6:50 AM, Panger, Melissa <Panger.Melissa@epa.gov> wrote:
> Hi Kris,
> I just sent you an invite to today's mosquito meeting. Also, here's the agenda for this afternoon's
mosquito meeting along with the other materials I sent out to the group.
 Let me know if you have any questions.
>
  Thanks,
> Melissa
  Melissa Panger, Ph.D.
>
  Senior Advisor, ERB2
> Environmental Fate and Effects Division Office of Pesticide Programs
  USEPA
> 703-305-6136
>
  panger.melissa@epa.gov
> From: Panger, Melissa
> Sent: Tuesday, June 12, 2018 9:57 AM
> To: 'rosemary_burk@fws.gov' <rosemary_burk@fws.gov>;
> teung.chin@ars.usda.gov; Patrice Ashfield <patrice_ashfield@fws.gov>;
> George Noguchi <george_noguchi@fws.gov>; Anderson, Brian
> <Anderson.Brian@epa.gov>; Atwood, Donald <Atwood.Donald@epa.gov>;
> Lennartz, Steven <Lennartz.Steven@epa.gov>; Ryan DeWitt
> <ryan.dewitt@noaa.gov>
> Subject: RE: Invitation: Mosquito adulticide kickoff meting @ Wed Jun
> 13, 2018 3pm - 4pm (EDT) (panger.melissa@epa.gov)
> Hi All,
> I think Rosemary plans to draft an agenda for tomorrow's kick-off meeting... so be on the look-out for
that.
> In the meantime I wanted to send some documents that might be useful to the group as we get started (I
wanted to make sure everyone had time to look them over before the meeting). So please find attached (in
no particular order) the following documents:
       The State Use and Usage Summary (SUUM) report for malathion from EPA's Biological and Economic
Analysis Division (BEAD) - the mosquito usage data can be found on p. 31
       Some malathion usage data I recently pulled from CAL DPR
>
       Milestones and timeline for the overall usage workgroup
       A list of usage data sources (compiled by the overall usage workgroup)
       A list of questions sent to the American Mosquito Control Association from EPA (after the inter-
agency meeting with them in May - before the mosquito usage group was established)
> Also, if anyone plans to attend the meeting tomorrow in person... please let us know ahead of time
because we will need to arrange to have someone sign you into the building and escort you up to the
meeting room.
```

```
> Please let me know if you have any questions.
 Thanks,
>
> Melissa
> Melissa Panger, Ph.D.
> Senior Advisor, ERB2
> Environmental Fate and Effects Division Office of Pesticide Programs
> USEPA
> 703-305-6136
> panger.melissa@epa.gov
> ----Original Appointment----
> From: rosemary_burk@fws.gov [mailto:rosemary_burk@fws.gov]
> Sent: Monday, June 11, 2018 8:24 AM
> To: rosemary_burk@fws.gov; teung.chin@ars.usda.gov; Panger, Melissa;
> Patrice Ashfield; George Noguchi; Anderson, Brian; Atwood, Donald;
> Lennartz, Steven; Ryan DeWitt
> Subject: Invitation: Mosquito adulticide kickoff meting @ Wed Jun 13,
> 2018 3pm - 4pm (EDT) (panger.melissa@epa.gov)
> When: Wednesday, June 13, 2018 3:00 PM-4:00 PM (UTC-05:00) Eastern Time (US & Canada).
> Where: EPA Office of Pesticide Programs - EFED
> more details
> »<https://www.google.com/calendar/event?action=VIEW&eid=MzNiaTA4ZHZodT</pre>
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> 1ZQ&ctz=America%2FNew_York&hl=en&es=0>
> Mosquito adulticide kickoff meting
> When
> Wed Jun 13, 2018 3pm - 4pm Eastern Time
> Where
> EPA Office of Pesticide Programs - EFED
  (map<https://maps.google.com/maps?q=EPA+Office+of+Pesticide+Programs+-
>
  +EFED&hl=en>)
> Calendar
  panger.melissa@epa.gov<mailto:panger.melissa@epa.gov>
>
> Who
> •
 rosemary_burk@fws.gov<mailto:rosemary_burk@fws.gov> - organizer
>
 teung.chin@ars.usda.gov<mailto:teung.chin@ars.usda.gov>
>
  panger.melissa@epa.gov<mailto:panger.melissa@epa.gov>
>
  patrice_ashfield@fws.gov<mailto:patrice_ashfield@fws.gov>
>
  george_noguchi@fws.gov<mailto:george_noguchi@fws.gov>
> •
> anderson.brian@epa.gov<mailto:anderson.brian@epa.gov>
>
> atwood.donald@epa.gov<mailto:atwood.donald@epa.gov>
>
>
  lennartz.steven@epa.gov<mailto:lennartz.steven@epa.gov>
```

```
ryan.dewitt@noaa.gov<mailto:ryan.dewitt@noaa.gov>
 A draft agenda will be sent out for comment soon.
  Melissa, thank you for hosting!
>
 The invitation is open for editing with meeting details.
> Going?
Yes<https://www.google.com/calendar/event?action=RESPOND&eid=MzNiaTA4ZHZodTRhazU4c24yZjU1aDJ2cWsgcGFuZ2Vy
LmllbGlzc2FAZXBhLmdvdg&rst=1&tok=MjEjcm9zZWlhcnlfYnVyaOBmd3MuZ292Mjg1Njk2ZTQ5MmY5ODZlMzJjZGMwMmNmMGMOMwFm
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Maybe<https://www.google.com/calendar/event?action=RESPOND&eid=MzNiaTA4ZHZodTRhazU4c24yZjU1aDJ2cWsgcGFuZ2
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GQ0ZmQ4ZTc1ZQ&ctz=America%2FNew_York&h1=en&es=0>
                                                       more options
»<a href="https://www.google.com/calendar/event?action=VIEW&eid=MzNiaTA4ZHZodTRhazU4c24yZjU1aDJ2cWsgcGFuZ2VyLm1">https://www.google.com/calendar/event?action=VIEW&eid=MzNiaTA4ZHZodTRhazU4c24yZjU1aDJ2cWsgcGFuZ2VyLm1</a>
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1ZQ&ctz=America%2FNew_York&hl=en&es=0>
> Invitation from Google Calendar<a href="https://www.google.com/calendar/">https://www.google.com/calendar/</a>
> You are receiving this courtesy email at the account
panger.melissa@epa.gov<mailto:panger.melissa@epa.gov> because you are an attendee of this event.
> To stop receiving future updates for this event, decline this event. Alternatively you can sign up for
a Google account at https://www.google.com/calendar/ and control your notification settings for your
entire calendar.
> Forwarding this invitation could allow any recipient to modify your RSVP response. Learn
More<a href="More">https://support.google.com/calendar/answer/37135#forwarding>.</a>
> <Malathion Extended SUUM.PDF>
  <CAL DPR 2016 Data (All Counties_Non_Ag) MALATHION.XLSX>
> <milestones_timeline_interagency_usage_ 5-30-18_final .docx> <Usage
> Data (March 2018).xlsx> <List of Questions for American Mosquito
> Control Association (May 2018).docx>
> <MA.Subcommittee.KickoffMtg.DraftAgenda.06.13.2018.docx>
```

Message

From: Panger, Melissa [Panger.Melissa@epa.gov]

Sent: 6/13/2018 10:50:32 AM

To: Garber, Kristina [Garber.Kristina@epa.gov]

Subject: FW: Invitation: Mosquito adulticide kickoff meting @ Wed Jun 13, 2018 3pm - 4pm (EDT) (panger.melissa@epa.gov)

Attachments: Malathion Extended SUUM.PDF; CAL DPR 2016 Data (All Counties Non Ag) MALATHION.XLSX;

milestones_timeline_interagency_usage_5-30-18_final.docx; Usage Data (March 2018).xlsx; List of Questions for

American Mosquito Control Association (May 2018).docx; MA.Subcommittee.KickoffMtg.DraftAgenda.06.13.2018.docx

Hi Kris.

I just sent you an invite to today's mosquito meeting. Also, here's the agenda for this afternoon's mosquito meeting along with the other materials I sent out to the group.

Let me know if you have any questions.

Thanks, Melissa

Melissa Panger, Ph.D.
Senior Advisor, ERB2
Environmental Fate and Effects Division
Office of Pesticide Programs
USEPA

703-305-6136 panger.melissa@epa.gov

From: Panger, Melissa

Sent: Tuesday, June 12, 2018 9:57 AM

To: 'rosemary_burk@fws.gov' <rosemary_burk@fws.gov>; teung.chin@ars.usda.gov; Patrice Ashfield

<patrice_ashfield@fws.gov>; George Noguchi <george_noguchi@fws.gov>; Anderson, Brian

<Anderson.Brian@epa.gov>; Atwood, Donald <Atwood.Donald@epa.gov>; Lennartz, Steven

<Lennartz.Steven@epa.gov>; Ryan DeWitt <ryan.dewitt@noaa.gov>

Subject: RE: Invitation: Mosquito adulticide kickoff meting @ Wed Jun 13, 2018 3pm - 4pm (EDT)

(panger.melissa@epa.gov)

Hi All,

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- Milestones and timeline for the overall usage workgroup
- A list of usage data sources (compiled by the overall usage workgroup)

- A list of questions sent to the American Mosquito Control Association from EPA (after the inter-agency meeting with them in May – before the mosquito usage group was established)

Also, if anyone plans to attend the meeting tomorrow in person... please let us know ahead of time because we will need to arrange to have someone sign you into the building and escort you up to the meeting room.

Please let me know if you have any questions.

Thanks, Melissa

Melissa Panger, Ph.D.
Senior Advisor, ERB2
Environmental Fate and Effects Division
Office of Pesticide Programs
USEPA

703-305-6136 panger.melissa@epa.gov

-----Original Appointment-----

From: rosemary_burk@fws.gov [mailto:rosemary_burk@fws.gov]

Sent: Monday, June 11, 2018 8:24 AM

To: rosemary_burk@fws.gov; teung.chin@ars.usda.gov; Panger, Melissa; Patrice Ashfield; George Noguchi; Anderson,

Brian; Atwood, Donald; Lennartz, Steven; Ryan DeWitt

Subject: Invitation: Mosquito adulticide kickoff meting @ Wed Jun 13, 2018 3pm - 4pm (EDT) (panger.melissa@epa.gov)

When: Wednesday, June 13, 2018 3:00 PM-4:00 PM (UTC-05:00) Eastern Time (US & Canada).

Where: EPA Office of Pesticide Programs - EFED

more details »

Mosquito adulticide kickoff meting

When Wed Jun 13, 2018 3pm - 4pm Eastern Time

Where EPA Office of Pesticide Programs - EFED (map)

Calendar panger.melissa@epa.gov

Who • rosemary burk@fws.gov - organizer

teung.chin@ars.usda.gov

· panger.melissa@epa.gov

patrice_ashfield@fws.gov

george_noguchi@fws.gov

anderson.brian@epa.gov

atwood.donald@epa.gov

· lennartz.steven@epa.gov

ryan.dewitt@noaa.gov

A draft agenda will be sent out for comment soon.

Melissa, thank you for hosting!

The invitation is open for editing with meeting details.

Going? Yes - Maybe - No more options »

Invitation from Google Calendar

You are receiving this courtesy email at the account panger.melissa@epa.gov because you are an attendee of this event.

To stop receiving future updates for this event, decline this event. Alternatively you can sign up for a Google account at https://www.google.com/calendar/ and control your notification settings for your entire calendar.

Forwarding this invitation could allow any recipient to modify your RSVP response. Learn More.

From: Pollack, Sara [sara_pollack@fws.gov]

Sent: 7/18/2019 10:58:28 AM

To: Garber, Kristina [Garber.Kristina@epa.gov]

CC: Leona Laniawe [leona_laniawe@fws.gov]; Suarez, Mark [Suarez.Mark@epa.gov]

Subject: Re: [EXTERNAL] RE: Malathion path forward follow up

We can travel to you if that works, Skype can work as well. We can let you know as the date gets closer what we decide. Can you send a calendar invite with the Skype information so we can get it on our calendars?

Thank You!

Sara

Sara J. Pollack, Ph.D. Environmental Contaminants Specialist U.S. Fish & Wildlife Service Ecological Services Program, MS: ES 5275 Leesburg Pike Falls Church, VA 22041-3803 703-358-2371

On Wed, Jul 17, 2019 at 3:45 PM Garber, Kristina < Garber.Kristina@epa.gov > wrote:

Hi Sara,

I have a meeting from 10-11, so, I cannot travel to your building. You and Leona are welcome to come here for the meeting. Alternatively, we can just meet via skype.

Yes, we can provide a write up prior to our meeting.

Thanks,

Kris

From: Pollack, Sara < sara_pollack@fws.gov > Sent: Wednesday, July 17, 2019 3:27 PM

To: Garber, Kristina < Garber Kristina@epa.gov >

Cc: Leona Laniawe <leona laniawe@fws.gov>; Suarez, Mark <Suarez.Mark@epa.gov>

Subject: Re: [EXTERNAL] RE: Malathion path forward follow up

Hi Kris,

We are available at 11 am on the 30th. Did you want to come here or should we come there? Would you be able to provide us with a draft write up of the methodology before hand?

That way we will be able to digest the material and can come up with some questions before hand for some good discussion! :-)

Sara

Sara J. Pollack, Ph.D.

Environmental Contaminants Specialist

U.S. Fish & Wildlife Service Ecological Services Program, MS: ES 5275 Leesburg Pike Falls Church, VA 22041-3803 703-358-2371

On Wed, Jul 17, 2019 at 3:13 PM Garber, Kristina (Garber Kristina@epa.gov) wrote:

Hi Sara,

Mark and I are both available at 11 am on July 30. Are you and Leona available at that time?
Thanks,
Kris
From: Pollack, Sara < sara_pollack@fws.gov> Sent: Wednesday, July 17, 2019 12:43 PM To: Garber, Kristina < Garber.Kristina@epa.gov> Cc: Leona Laniawe < leona_laniawe@fws.gov>; Suarez, Mark < Suarez.Mark@epa.gov> Subject: Re: [EXTERNAL] RE: Malathion path forward follow up
Hi Kris,
I think Tuesday the 30th in the morning can work for Leona and myself. Does that work out okay? Sara
Sara J. Pollack, Ph.D.
Environmental Contaminants Specialist
U.S. Fish & Wildlife Service Ecological Services Program, MS: ES 5275 Leesburg Pike Falls Church, VA 22041-3803 703-358-2371
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On Wed, Jul 17, 2019 at 11:46 AM Garber, Kristina < Garber.Kristina@epa.gov > wrote:

Deliberative Process / Ex. 5

Deliberative Process / Ex. 5 I think it would be most productive if we share a description of our method and then meet. Mark Suarez is the most familiar with the available data, so, I suggest that Mark and I meet with you to discuss the method. Mark and I are available to meet on July 29 or 30. Do either of those dates work for you?

Thanks,

Kris

From: Pollack, Sara < sara_pollack@fws.gov >

Sent: Tuesday, July 16, 2019 9:24 AM

To: Garber, Kristina < Garber. Kristina@epa.gov>

Cc: Leona Laniawe < leona laniawe@fws.gov >; Karen Myers < karen myers@fws.gov >

Subject: Malathion path forward follow up

Hi Kris,

Thanks for attending the meeting last week to discuss our thoughts on a path forward to continue with the malathion BiOp.

Deliberative Process / Ex. 5

You mentioned you and others at EPA had been tossing around ideas and we had also been looking into how to approach this same question. Leona and I will be the main contacts for discussing this item, would you have some time this week to share what you and your folks had been going over?

Thursday and Friday of this week look to be the best days for Leona and myself.

Let us know what works for you.

Thank You!

Sara

Sara J. Pollack, Ph.D.

Environmental Contaminants Specialist

U.S. Fish & Wildlife Service Ecological Services Program, MS: ES 5275 Leesburg Pike Falls Church, VA 22041-3803 703-358-2371

Message

From: Garber, Kristina [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP

(FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=C4FBFBF6569041F4BD559765E027AA31-KRISTINA GARBER]

Sent: 12/4/2018 2:12:07 PM

To: Lennartz, Steven [Lennartz.Steven@epa.gov]

Subject: RE: EPA ESA Usage Workgroup

ok

From: Lennartz, Steven

Sent: Tuesday, December 04, 2018 9:11 AM **To:** Garber, Kristina < Garber.Kristina@epa.gov>

Subject: RE: EPA ESA Usage Workgroup

7771 @ 9:15

From: Garber, Kristina

Sent: Tuesday, December 04, 2018 9:09 AM

To: Rossmeisl, Colleen <<u>Rossmeisl.Colleen@epa.gov</u>>; Anderson, Brian <<u>Anderson.Brian@epa.gov</u>>; Panger, Melissa <<u>Panger.Melissa@epa.gov</u>>; Connolly, Jennifer <<u>Connolly, Jennifer@epa.gov</u>>; Kyle, Lee <<u>Kyle, Lee @epa.gov</u>>; Becker,

Jonathan <Becker.Jonathan@epa.gov>; Paisley-Jones, Claire <Paisley-Jones.Claire@epa.gov>; Sims, Diann

<<u>Sims.Diann@epa.gov</u>>; Perry, Tracy <<u>Perry.Tracy@epa.gov</u>>; Peck, Charles <<u>Peck.Charles@epa.gov</u>>; Lennartz, Steven

<Lennartz.Steven@epa.gov>; Suarez, Mark <Suarez.Mark@epa.gov>

Subject: RE: EPA ESA Usage Workgroup

Hello,

Claire and I are in 7100. Are we meeting today?

Kris

-----Original Appointment-----From: Rossmeisl, Colleen

Sent: Tuesday, November 27, 2018 6:59 AM

To: Rossmeisl, Colleen; Anderson, Brian; Panger, Melissa; Connolly, Jennifer; Kyle, Lee; Becker, Jonathan; Paisley-Jones,

Claire; Sims, Diann; Perry, Tracy; Garber, Kristina; Peck, Charles; Lennartz, Steven; Suarez, Mark

Subject: EPA ESA Usage Workgroup

When: Tuesday, December 04, 2018 9:15 AM-10:00 AM (UTC-05:00) Eastern Time (US & Canada).

Where: DCRoomPYS7771D/Potomac-Yard-One

Agenda for meeting today:

- Moving start time to 9:15 am today
- Discuss slide deck and thoughts for briefing next week. I have received comments on several slide decks and
 Steve has created new maps, so it may be easier to discuss then send around. We also received new slide edits
 from NMFS last night. Based on discussions with EPA/Services management, a proposed agenda for the briefing
 was created last week (see below). However, we have not yet received feedback on this agenda or comments on
 slides from FWS.
- Other items?

- Introduction: 5 min (Brian and Patrice)
 - Purpose: We are going to present progress on the action area development related to agricultural uses of malathion.

Deliberative Process / Ex. 5

- Each agency will give their perspective on the pros and cons of the methods at the end of the presentation.
- Presentation (EPA and FWS). 30 min
- Perspectives on pros and cons of the methodology and recommendations
 - EPA: 10 minutes
 FWS: 10 minutes
 NMFS: 10 minutes
 USDA: 10 minutes
- Discussion: 30 minutes

0

0

· Wrap up and next steps: 15 minutes

→ Join Skype Meeting

Trouble Joining? Try Skype Web App

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Find a local number

Conference ID Conference Line(Code / Ex. 6 English (United States)

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Population-level risk assessment for an endangered butterfly species exposed to chlorpyrifos

Kris Garber¹, Nancy Golden², Sarah Warner², Jennifer Connolly¹ and Andrew Kanarek¹

¹United States Environmental Protection Agency ²United States Fish and Wildlife Service





November 10, 2016

Case study background

- Poweshiek skipperling (Oarisma poweshiek)
 - · Listed as endangered
 - Habitat: tall grass prairies, prairie fens
 - Life cycle
 - Larvae go through several instars while on grass
 - Adults emerge in June-July

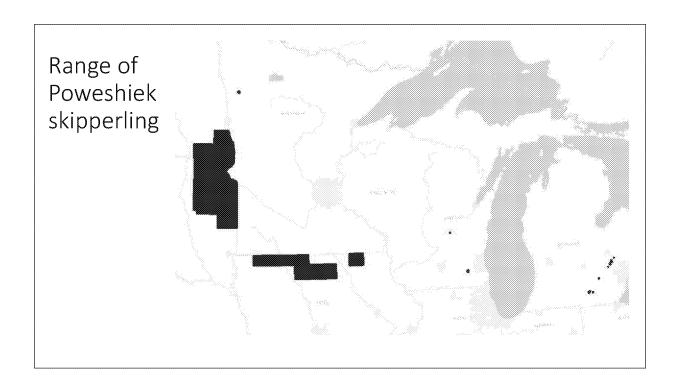
Chlorpyrifos

- · Organophosphate insecticide
- Registered for use on variety of agricultural crops
- · Focus on population impacts resulting from mortality to individuals



Determine proportion of population exposed

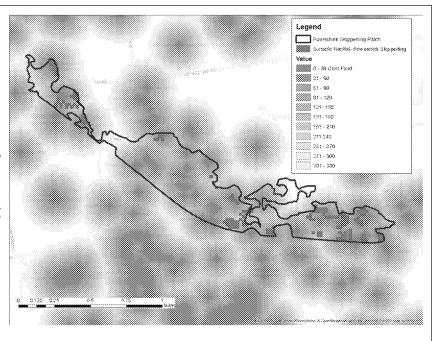
- Select "suitable habitat" from within range data
 - US Geological Survey Gap Analysis Program (GAP) landcover
 - Suitable habitat landcover is fixed over years based on most recent GAP data (2001)
 - · GAP has levels of detail in defining landcover class
 - Assume individuals are uniformly distributed on suitable habitat
- Calculate amount of "suitable habitat" areas with drift corresponding to different distances from edge of field (EOF)
 - Use US Department of Agriculture Crop Data Layer (CDL) landcovers for 2010-2015



Example: Long lake patch (MI)

Shrubland/Grassland landcover from GAP is used to represent preferred habitat of Poweshiek skipperling

Overlap with corn

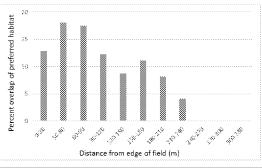


Determine magnitude of mortality

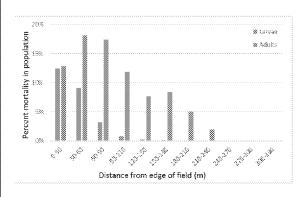
- Toxicity data used to generate dose-response curve
 - Larval Contact LD50 = 3.16 mg/kg-bw (Wright et al. 2000)
 - Slope: 3.4
 - Test species: corn rootworm (Diabrotica virgifera virgifera)
 - Lepidopteran test species is in same order as species of interest
 - Adult Contact LD50 = 0.46 mg/kg-bw (Stevenson 1978)
 - Slope: 4.5 (default)
 - Test species: honey bee (Apis mellifera)
 - Uncertainty in surrogacy due relationship of test species and assessed species (different order)

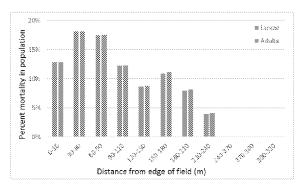
Determine magnitude of mortality

- Contact exposure at different distances from EOF calculated by multiplying deposition fraction by estimated exposure concentration @ EOF
 - EEC @ EOF = 65 mg/kg-bw*AppRate (T-REX v.1.5.2)
 - Maximum single application rate for corn = 3 lb a.i./A (USEPA 2016)
 - Deposition fraction calculated using AgDRIFT model
- Magnitude of mortality multiplied by percent of population located in each spray drift zone (assume uniform distribution)



Current labeled use on corn





Ground spray

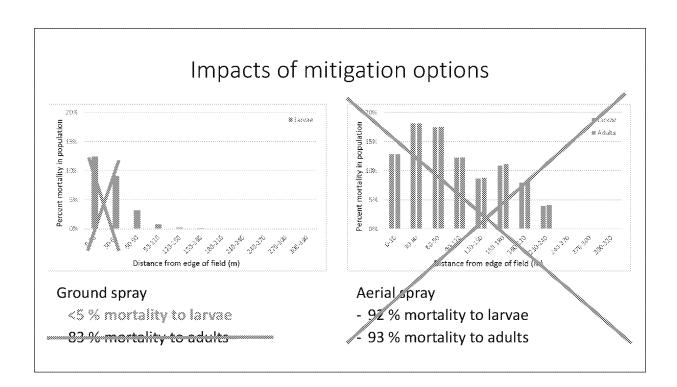
- 26 % mortality to larvae
- 83 % mortality to adults

Aerial spray

- 92 % mortality to larvae
- 93 % mortality to adults

Mitigation options

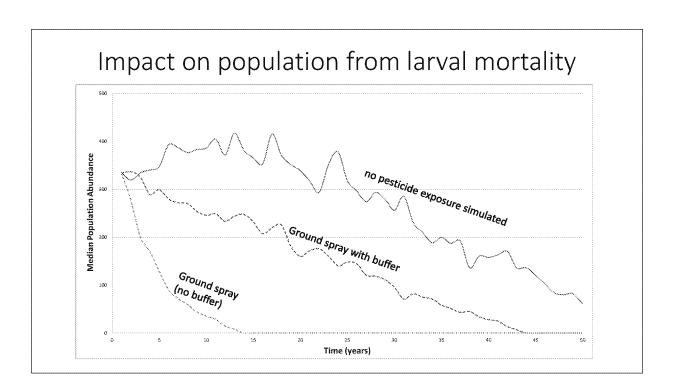
- Limit applications near habitat to ground spray
- Limit timing to avoid exposures to adults (present in June in July)
- Add spray drift buffer to limit exposure to larvae
- Rate reductions

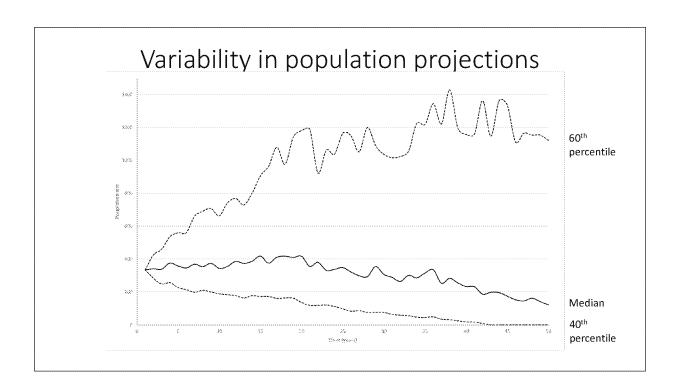


Exploration of applying population model for Poweshiek skipperling

- Explore utility of mitigation options
- Model individuals in a given patch (subpopulations)
 - Individuals are not expected to move between patches
- Simple exponential growth population model
 - Growth (λ) is based on population counts from consecutive years
 - Years: 1988-1996; range: 190-706 individuals (Schlicht et al. 2009)
 - Annual mortality subtracted from number of individuals (Nt)
 - 1000 iterations run with random draws on λ

$$N_{t+1} = \lambda N_t$$





Conclusions

- Exploring method for estimating portion of population exposed and resulting mortality
- Potential utility in mitigation options can be characterized using simple population model
 - Challenges when population size estimates are uncertain or are not available
- Future work
 - · Account for risks to other patches of Poweshiek skipperling
 - Account for dietary exposure
 - Explore differential contact based exposures to adults and larvae
 - Incorporate year-to-year variability in crop landcovers
 - · Broad application to other listed species

Sources

- Wright, R.J., M.E. Scharf, L.J. Meinke, X. Zhou, B.D. Siegfried, and L.D. Chandler (2000). Larval susceptibility of an insecticide-resistant Western corn rootworm (Coleoptera: Chrysomelidae) population to soil insecticides: Laboratory bioassays, assays of detoxification enzymes, and field performance. J. Econ. Entomol., 93(1): 7 13.
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- Stevenson, J.H. (1978) The acute toxicity of unformulated pesticides to worker honey bees (Apis mellifera L). Plant Pathology 27(1):38-40.
- Teske ME, SL Bird, DM Esterly, SL Ray, and SG Perry. 2001. A User's Guide for AgDRIFT 2.01: A
 Tiered Approach for the Assessment of Spray Drift of Pesticides, Regulatory Version. Continuum
 Dynamics Report No 01-02.
- USGS GAP: http://gapanalysis.usgs.gov/data/
- USEPA. 2012. User's Guide: T-REX Version 1.5 (Terrestrial Residue Exposure Model). Office of Pesticide Programs, Environmental Fate and Effects Division. Available online at: https://www.epa.gov/pesticide-science-and-assessing-pesticide-risks/t-rex-version-15-users-guide-calculating-pesticide
- USEPA 2016. Appendix 1-3. Master use table for chlorpyrifos. Available online at: https://www3.epa.gov/pesticides/nas/chlorpyrifos/appendix-1-3.docx

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Garber, Kristina [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP
From:
             (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=C4FBFBF6569041F4BD559765E027AA31-KRISTINA GARBER]
Sent:
             6/13/2018 10:54:25 AM
             Panger, Melissa [Panger.Melissa@epa.gov]
To:
Subject:
             Re: Invitation: Mosquito adulticide kickoff meting @ Wed Jun 13, 2018 3pm - 4pm (EDT) (panger.melissa@epa.gov)
It's ok. It will probably end up saving us time because we won't have to catch each other up on this
meeting ①
> On Jun 13, 2018, at 6:52 AM, Panger, Melissa <Panger.Melissa@epa.gov> wrote:
> Thank YOU... I hate to add another meeting to your schedule!
> ----Original Message----
> From: Garber, Kristina
> Sent: Wednesday, June 13, 2018 6:52 AM
> To: Panger, Melissa <Panger.Melissa@epa.gov>
> Subject: Ré: Invitation: Mosquito adulticide kickoff meting @ Wed Jun 13, 2018 3pm - 4pm (EDT)
(panger.melissa@epa.gov)
> Thanks
>> On Jun 13, 2018, at 6:50 AM, Panger, Melissa <Panger.Melissa@epa.gov> wrote:
>>
>> Hi Kris,
>>
>> I just sent you an invite to today's mosquito meeting. Also, here's the agenda for this afternoon's
mosquito meeting along with the other materials I sent out to the group.
>> Let me know if you have any questions.
>>
>> Thanks,
>> Melissa
>>
>>
>> Melissa Panger, Ph.D.
>> Senior Advisor, ERB2
>> Environmental Fate and Effects Division Office of Pesticide Programs
>> USEPA
>>
>> 703-305-6136
>> panger.melissa@epa.gov
>> From: Panger, Melissa
>> Sent: Tuesday, June 12, 2018 9:57 AM
       'rosemary_burk@fws.gov' <rosemary_burk@fws.gov>;
>> To:
>> teung.chin@ars.usda.gov; Patrice Ashfield <patrice_ashfield@fws.gov>;
>> George Noguchi <george_noguchi@fws.gov>; Anderson, Brian
>> <Anderson.Brian@epa.gov>; Atwood, Donald <Atwood.Donald@epa.gov>;
>> Lennartz, Steven <Lennartz.Steven@epa.gov>; Ryan DeWitt
>> <ryan.dewitt@noaa.gov>
>> Subject: RE: Invitation: Mosquito adulticide kickoff meting @ Wed Jun
>> 13, 2018 3pm - 4pm (EDT) (panger.melissa@epa.gov)
>>
>> Hi All,
>>
>> I think Rosemary plans to draft an agenda for tomorrow's kick-off meeting... so be on the look-out for
that.
>>
>> In the meantime I wanted to send some documents that might be useful to the group as we get started (I
wanted to make sure everyone had time to look them over before the meeting). So please find attached (in
no particular order) the following documents:
>>
>>
>> *
       The State Use and Usage Summary (SUUM) report for malathion from EPA's Biological and Economic
Analysis Division (BEAD) - the mosquito usage data can be found on p. 31
```

Some malathion usage data I recently pulled from CAL DPR Milestones and timeline for the overall usage workgroup

```
A list of usage data sources (compiled by the overall usage workgroup)
             A list of questions sent to the American Mosquito Control Association from EPA (after the inter-
>> *
agency meeting with them in May - before the mosquito usage group was established)
>>
>> Also, if anyone plans to attend the meeting tomorrow in person... please let us know ahead of time
because we will need to arrange to have someone sign you into the building and escort you up to the
meeting room.
>>
>> Please let me know if you have any questions.
>>
>> Thanks,
>> Melissa
>>
>> Melissa Panger, Ph.D.
>> Senior Advisor, ERB2
>> Environmental Fate and Effects Division Office of Pesticide Programs
>> USEPA
>>
>> 703-305-6136
>> panger.melissa@epa.gov
>> ----Original Appointment----
>> From: rosemary_burk@fws.gov [mailto:rosemary_burk@fws.gov]
>> Sent: Monday, June 11, 2018 8:24 AM
>> To: rosemary_burk@fws.gov; teung.chin@ars.usda.gov; Panger, Melissa;
>> Patrice Ashfield; George Noguchi; Anderson, Brian; Atwood, Donald;
>> Lennartz, Steven; Ryan DeWitt
>> Subject: Invitation: Mosquito adulticide kickoff meting @ Wed Jun 13,
>> 2018 3pm - 4pm (EDT) (panger.melissa@epa.gov)
>> When: Wednesday, June 13, 2018 3:00 PM-4:00 PM (UTC-05:00) Eastern Time (US & Canada).
>> Where: EPA Office of Pesticide Programs - EFED
>>
>> more details
>> ><a href="https://www.google.com/calendar/event?action=VIEW&eid=MZNiaTA4ZHZodT">https://www.google.com/calendar/event?action=VIEW&eid=MZNiaTA4ZHZodT">https://www.google.com/calendar/event?action=VIEW&eid=MZNiaTA4ZHZodT">https://www.google.com/calendar/event?action=VIEW&eid=MZNiaTA4ZHZodT">https://www.google.com/calendar/event?action=VIEW&eid=MZNiaTA4ZHZodT">https://www.google.com/calendar/event?action=VIEW&eid=MZNiaTA4ZHZodT">https://www.google.com/calendar/event?action=VIEW&eid=MZNiaTA4ZHZodT">https://www.google.com/calendar/event?action=VIEW&eid=MZNiaTA4ZHZodT">https://www.google.com/calendar/event?action=VIEW&eid=MZNiaTA4ZHZodT">https://www.google.com/calendar/event?action=VIEW&eid=MZNiaTA4ZHZodT">https://www.google.com/calendar/event?action=VIEW&eid=MZNiaTA4ZHZodT">https://www.google.com/calendar/event?action=VIEW&eid=MZNiaTA4ZHZodT">https://www.google.com/calendar/event?action=VIEW&eid=MZNiaTA4ZHZodT">https://www.google.com/calendar/event?action=VIEW&eid=MZNiaTA4ZHZodT">https://www.google.com/calendar/event?action=VIEW&eid=MZNiaTA4ZHZodT">https://www.google.com/calendar/event?action=VIEW&eid=MZNiaTA4ZHZodT">https://www.google.com/calendar/event?action=VIEW&eid=MZNiaTA4ZHZodT">https://www.google.com/calendar/event?action=VIEW&eid=MZNiaTA4ZHZodT">https://www.google.com/calendar/event?action=VIEW&eid=MZNiaTA4ZHZodT">https://www.google.com/calendar/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event
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>> nlfynvya0Bmd3Muz292Mjg1Njk2ZTQ5MmY5ODZlMzJjZGMwMmNmMGM0MwFmMGQ0ZmQ4ZTc
>> 1ZQ&ctz=America%2FNew_York&hl=en&es=0>
>> Mosquito adulticide kickoff meting
>> When
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>> Wed Jun 13, 2018 3pm - 4pm Eastern Time
>>
>> Where
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>> EPA Office of Pesticide Programs - EFED
>> (map<https://maps.google.com/maps?q=EPA+Office+of+Pesticide+Programs+-
>> +EFED&h1=en>)
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>> Calendar
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>> panger.melissa@epa.gov<mailto:panger.melissa@epa.gov>
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>> Who
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>> rosemary_burk@fws.gov<mailto:rosemary_burk@fws.gov> - organizer
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>> patrice_ashfield@fws.gov<mailto:patrice_ashfield@fws.gov>
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>> george_noguchi@fws.gov<mailto:george_noguchi@fws.gov>
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>> anderson.brian@epa.gov<mailto:anderson.brian@epa.gov>
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>> atwood.donald@epa.gov<mailto:atwood.donald@epa.gov>
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>> •
>>
    lennartz.steven@epa.gov<mailto:lennartz.steven@epa.gov>
>>
>>
>>
>> ryan.dewitt@noaa.gov<mailto:ryan.dewitt@noaa.gov>
>>
>>
>> A draft agenda will be sent out for comment soon.
>> Melissa, thank you for hosting!
>> The invitation is open for editing with meeting details.
>>
Yes<https://www.google.com/calendar/event?action=RESPOND&eid=MzNiaTA4ZHZodTRhazU4c24yZjU1aDJ2cWsgcGFuZ2Vy
LmllbGlzc2FAZXBhLmdvdg&rst=1&tok=MjEjcm9zZWlhcnlfYnVyaOBmd3MuZ292Mjg1Njk2ZTQ5MmY5ODZlMzJjZGMwMmNmMGMOMWFm
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Maybe<https://www.google.com/calendar/event?action=RESPOND&eid=MzNiaTA4ZHZodTRhazU4c24yZjU1aDJ2cWsgcGFuZ2
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1ZQ&ctz=America%2FNew_York&h1=en&es=0>
>>
>>
>> Invitation from Google Calendar<a href="https://www.google.com/calendar/">https://www.google.com/calendar/></a>
>>
>> You are receiving this courtesy email at the account
panger.melissa@epa.gov<mailto:panger.melissa@epa.gov> because you are an attendee of this event.
>>
>> To stop receiving future updates for this event, decline this event. Alternatively you can sign up for
a Google account at https://www.google.com/calendar/ and control your notification settings for your
entire calendar.
>> Forwarding this invitation could allow any recipient to modify your RSVP response. Learn
More<https://support.google.com/calendar/answer/37135#forwarding>.
>>
>>
>> <Malathion Extended SUUM.PDF>
>> <CAL DPR 2016 Data (All Counties_Non_Ag) MALATHION.XLSX>
>> <milestones_timeline_interagency_usage__5-30-18_final .docx> <Usage
>> Data (March 2018).xlsx> <List of Questions for American Mosquito
>> Control Association (May 2018).docx>
>> <MA.Subcommittee.KickoffMtg.DraftAgenda.06.13.2018.docx>
```

From: Garber, Kristina [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP

(FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=C4FBFBF6569041F4BD559765E027AA31-KRISTINA GARBER]

Sent: 6/13/2018 10:52:14 AM

To: Panger, Melissa [Panger.Melissa@epa.gov]

Subject: Re: Invitation: Mosquito adulticide kickoff meting @ Wed Jun 13, 2018 3pm - 4pm (EDT) (panger.melissa@epa.gov)

```
Thanks
```

```
> On Jun 13, 2018, at 6:50 AM, Panger, Melissa <Panger.Melissa@epa.gov> wrote:
> Hi Kris,
> I just sent you an invite to today's mosquito meeting. Also, here's the agenda for this afternoon's
mosquito meeting along with the other materials I sent out to the group.
> Let me know if you have any questions.
> Thanks,
> Melissa
> Melissa Panger, Ph.D.
> Senior Advisor, ERB2
> Environmental Fate and Effects Division
 Office of Pesticide Programs
> USEPA
> 703-305-6136
>
 panger.melissa@epa.gov
> From: Panger, Melissa
> Sent: Tuesday, June 12, 2018 9:57 AM
> To: 'rosemary_burk@fws.gov' <rosemary_burk@fws.gov>; teung.chin@ars.usda.gov; Patrice Ashfield
<patrice_ashfield@fws.gov>; George Noguchi <george_noguchi@fws.gov>; Anderson, Brian
<Anderson.Brian@epa.gov>; Atwood, Donald <Atwood.Donald@epa.gov>; Lennartz, Steven
<Lennartz.Steven@epa.gov>; Ryan DeWitt <ryan.dewitt@noaa.gov>
> Subject: RE: Invitation: Mosquito adulticide kickoff meting @ Wed Jun 13, 2018 3pm - 4pm (EDT)
(panger.melissa@epa.gov)
> Hi All,
> I think Rosemary plans to draft an agenda for tomorrow's kick-off meeting... so be on the look-out for
that.
> In the meantime I wanted to send some documents that might be useful to the group as we get started (I
wanted to make sure everyone had time to look them over before the meeting). So please find attached (in
no particular order) the following documents:
>
       The State Use and Usage Summary (SUUM) report for malathion from EPA's Biological and Economic
>
Analysis Division (BEAD) - the mosquito usage data can be found on p. 31
       Some malathion usage data I recently pulled from CAL DPR
>
       Milestones and timeline for the overall usage workgroup
       A list of usage data sources (compiled by the overall usage workgroup)
       A list of questions sent to the American Mosquito Control Association from EPA (after the inter-
agency meeting with them in May - before the mosquito usage group was established)
> Also, if anyone plans to attend the meeting tomorrow in person... please let us know ahead of time
because we will need to arrange to have someone sign you into the building and escort you up to the
meeting room.
> Please let me know if you have any questions.
> Thanks.
> Melissa
> Melissa Panger, Ph.D.
 Senior Advisor, ERB2
> Environmental Fate and Effects Division
```

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> Office of Pesticide Programs
> USEPA
> 703-305-6136
> panger.melissa@epa.gov
> ----Original Appointment----
> From: rosemary_burk@fws.gov [mailto:rosemary_burk@fws.gov]
> Sent: Monday, June 11, 2018 8:24 AM
> To: rosemary_burk@fws.gov; teung.chin@ars.usda.gov; Panger, Melissa; Patrice Ashfield; George Noguchi;
Anderson, Brian; Atwood, Donald; Lennartz, Steven; Ryan DeWitt
> Subject: Invitation: Mosquito adulticide kickoff meting @ Wed Jun 13, 2018 3pm - 4pm (EDT)
(panger.melissa@epa.gov)
> When: Wednesday, June 13, 2018 3:00 PM-4:00 PM (UTC-05:00) Eastern Time (US & Canada).
> Where: EPA Office of Pesticide Programs - EFED
> more details
>><https://www.google.com/calendar/event?action=VIEW&eid=MzNiaTA4ZHZodTRhazU4c24yZjU1aDJ2cWsgcGFuZ2VyLm1lb</pre>
Glzc2FAZXBhLmdvdg&tok=MjEjcm9zZW1hcnlfYnvya0Bmd3MuZ292Mjg1Njk2ZTQ5MmY5ODZlMZJjZGMwMmNmMGM0MwFmMGQ0ZmQ4ZTc
1ZQ&ctz=America%2FNew_York&h1=en&es=0>
> Mosquito adulticide kickoff meting
> When
> Wed Jun 13, 2018 3pm - 4pm Eastern Time
> Where
 EPA Office of Pesticide Programs - EFED
(map<https://maps.google.com/maps?q=EPA+Office+of+Pesticide+Programs+-+EFED&hl=en>)
> Calendar
 panger.melissa@epa.gov<mailto:panger.melissa@epa.gov>
>
>
 Who
>
>
 rosemary_burk@fws.gov<mailto:rosemary_burk@fws.gov> - organizer
>
  teung.chin@ars.usda.gov<mailto:teung.chin@ars.usda.gov>
>
>
 panger.melissa@epa.gov<mailto:panger.melissa@epa.gov>
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>
  patrice_ashfield@fws.gov<mailto:patrice_ashfield@fws.gov>
>
 george_noguchi@fws.gov<mailto:george_noguchi@fws.gov>
>
>
 anderson.brian@epa.gov<mailto:anderson.brian@epa.gov>
>
> atwood.donald@epa.gov<mailto:atwood.donald@epa.gov>
>
>
 lennartz.steven@epa.gov<mailto:lennartz.steven@epa.gov>
>
  ryan.dewitt@noaa.gov<mailto:ryan.dewitt@noaa.gov>
> A draft agenda will be sent out for comment soon.
> Melissa, thank you for hosting!
```

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The invitation is open for editing with meeting details.
Yes<https://www.google.com/calendar/event?action=RESPOND&eid=MzNiaTA4ZHZodTRhazU4c24yZjU1aDJ2cWsgcGFuZ2Vy
LmllbGlzc2FAZXBhLmdvdg&rst=1&tok=MjEjcm9zZW1hcnlfYnVyaOBmd3MuZ292Mjg1Njk2ZTQ5MmY5ODZlMzJjZGMwMmNmMGMOMWFm
MGQ0ZmQ4ZTc1ZQ&ctz=America%2FNew_York&h1=en&es=0> -
Maybe<https://www.google.com/calendar/event?action=RESPOND&eid=MzNiaTA4ZHZodTRhazU4c24yZjU1aDJ2cWsgcGFuZ2
VyĹmllbGlzc2FAZXBhĽmdvdg&rst=3&tok=MjEjcm9zZwlhcnlfYnVyaOBmd3MuZ292Mjg1Njk2ZTQ5MmY5ODZĺMzJjZGMwMmNmMGMOMw
FmMGQ0ZmQ4ZTc1ZQ&ctz=America%2FNew_York&h1=en&es=0>
No<https://www.google.com/calendar/event?action=RESPOND&eid=MzNiaTA4ZHZodTRhazU4c24yZjU1aDJ2cWsgcGFuZ2VyL
GQ0ZmQ4ZTc1ZQ&ctz=America%2FNew_York&h1=en&es=0>
                                                                                                    more options
»<a href="https://www.google.com/calendar/event?action=VIEW&eid=MzNiaTA4ZHZodTRhazU4c24yZju1aDJ2cWsgcGFuZ2VyLm1lb">w<a href="https://www.google.com/calendar/event?action=VIEW&eid=MzNiaTA4ZHZodTRhazU4c24yZju1aDJ2cWsgcGFuZ2VyLm1lb">w<a href="https://www.google.com/calendar/event?action=VIEW&eid=MzNiaTA4ZHZodTRhazU4c24yZju1aDJ2cWsgcGFuZ2VyLm1lb">w<a href="https://www.google.com/calendar/event?action=VIEW&eid=MzNiaTA4ZHZodTRhazU4c24yZju1aDJ2cWsgcGFuZ2VyLm1lb">w<a href="https://www.google.com/calendar/event?action=VIEW&eid=MzNiaTA4ZHZodTRhazU4c24yZju1aDJ2cWsgcGFuZ2VyLm1lb">w<a href="https://www.google.com/calendar/event?action=VIEW&eid=MzNiaTA4ZHZodTRhazU4c24yZju1aDJ2cWsgcGFuZ2VyLm1lb">w<a href="https://www.google.com/calendar/event?action=VIEW&eid=MzNiaTA4ZHZodTRhazU4c24yZju1aDJ2cWsgcGFuZ2VyLm1lb">w<a href="https://www.google.com/calendar/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/event/ev
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1ZQ&ctz=America%2FNew_York&h1=en&es=0>
> Invitation from Google Calendar<https://www.google.com/calendar/>
   You are receiving this courtesy email at the account
panger.melissa@epa.gov<mailto:panger.melissa@epa.gov> because you are an attendee of this event.
> To stop receiving future updates for this event, decline this event. Alternatively you can sign up for
a Google account at https://www.google.com/calendar/ and control your notification settings for your
entire calendar.
  Forwarding this invitation could allow any recipient to modify your RSVP response. Learn
More<a href="https://support.google.com/calendar/answer/37135#forwarding">https://support.google.com/calendar/answer/37135#forwarding>.
> <Malathion Extended SUUM.PDF>
> <CAL DPR 2016 Data (All Counties_Non_Ag) MALATHION.XLSX>
> <milestones_timeline_interagency_usage_ 5-30-18_final .docx>
> <Usage Data (March 2018).xlsx>
> <List of Questions for American Mosquito Control Association (May 2018).docx>
> <MA.Subcommittee.KickoffMtg.DraftAgenda.06.13.2018.docx>
```

Message

Garber, Kristina [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP From:

(FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=C4FBFBF6569041F4BD559765E027AA31-KRISTINA GARBER]

Sent: 6/8/2018 1:07:03 PM

To: Panger, Melissa [Panger.Melissa@epa.gov]; Atwood, Donald [Atwood.Donald@epa.gov]; Lennartz, Steven

[Lennartz.Steven@epa.gov]

CC: Sims, Diann [Sims.Diann@epa.gov]

FW: Pesticide Working Group - Meeting Notes and Updated Catalog Subject: Attachments: Usage Data Sources EPA.XLSX; EPA Data Criteria 03262018 (004).docx

Here are BEAD's comments on FWS' catalogue

From: Sims, Diann

Sent: Tuesday, March 27, 2018 9:34 AM

To: Hill2, Elizabeth - ARS <Elizabeth.Hill2@ARS.USDA.GOV>; Stilson, Ashley <ashley_stilson@fws.gov>; Kunickis, Sheryl -OSEC <Sheryl.Kunickis@osec.usda.gov>; Paisley-Jones, Claire <Paisley-Jones.Claire@epa.gov>; Shultz, Gina <gina_shultz@fws.gov>; cathy.tortorici@noaa.gov; david epstein <David.Epstein@ARS.USDA.GOV>; Perry, Tracy <Perry.Tracy@epa.gov>; Miller, Wynne <Miller.Wynne@epa.gov>; tony.hawkes@noaa.gov; Becker, Jonathan <Becker.Jonathan@epa.gov>; Echeverria, Marietta <Echeverria.Marietta@epa.gov>; George Noguchi <george noguchi@fws.gov>; Nancy Golden <nancy golden@fws.gov>; Garber, Kristina <Garber.Kristina@epa.gov>; Myers, Clayton - ARS <Clayton.Myers@ARS.USDA.GOV>; Chin, Teung <Teung.Chin@ARS.USDA.GOV>

Subject: RE: Pesticide Working Group - Meeting Notes and Updated Catalog

Good Morning Everyone,

Please find attached EPA's edits to the usage resources spreadsheet and an overview of our data quality guidance for secondary data. We look forward to this afternoon's discussion.

From: Stilson, Ashley [mailto:ashley_stilson@fws.gov]

Sent: Thursday, March 22, 2018 5:20 PM

To: Kunickis, Sheryl - OSEC <Sheryl.Kunickis@osec.usda.gov>; paisley-jones.claire@epa.gov; Gina Shultz <gina_shultz@fws.gov>; cathy.tortorici@noaa.gov; Epstein, David <David.Epstein@ARS.USDA.GOV>; perry.tracy@epa.gov; Hill2, Elizabeth - ARS < Elizabeth.Hill2@ARS.USDA.GOV>; Sims.Diann@epa.gov; miller.wynne@epa.gov; tony.hawkes@noaa.gov; becker.jonathan@epa.gov; echeverria.marietta@epa.gov; George Noguchi <george noguchi@fws.gov>; Nancy Golden <nancy golden@fws.gov>; garber.kristina@epa.gov

Subject: Pesticide Working Group - Meeting Notes and Updated Catalog

Good afternoon all,

Please find attached the meeting notes from the March 20th meeting, including next week's agenda, and the updated Usage Data Catalog.

Ashley Stilson

Special Assistant to the Deputy Assistant Director Knauss Fellow 2018 **Ecological Services** U.S. Fish and Wildlife Service 5275 Leesburg Pike Falls Church, VA 22041-3803

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Message

From: Garber, Kristina [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP

(FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=C4FBFBF6569041F4BD559765E027AA31-KRISTINA GARBER]

Sent: 7/29/2019 12:54:42 PM

To: Rossmeisl, Colleen [Rossmeisl.Colleen@epa.gov]; Peck, Charles [Peck.Charles@epa.gov]; Paisley-Jones, Claire

[Paisley-Jones.Claire@epa.gov]; Connolly, Jennifer [Connolly.Jennifer@epa.gov]; Donovan, Elizabeth

[Donovan.Elizabeth@epa.gov]

CC: 'Anderson, Brian' [anderson.brian@epa.gov]; Suarez, Mark [Suarez.Mark@epa.gov]

Subject: FW: Malathion path forward follow up

Attachments: Carbaryl usage HI-PR method 7-29-19(draft).docx; Methomyl usage HI-PR method 7-29-19(draft).docx

FYI: Deliberative Process / Ex. 5

From: Garber, Kristina

Sent: Monday, July 29, 2019 8:54 AM **To:** Pollack, Sara <sara_pollack@fws.gov>

Cc: Leona Laniawe <leona_laniawe@fws.gov>; Karen Myers <karen_myers@fws.gov>; Suarez, Mark

<Suarez.Mark@epa.gov>; 'Anderson, Brian' <anderson.brian@epa.gov>

Subject: RE: Malathion path forward follow up

draft internal deliberative for interagency deliberations only, do not cite or distribute

Hello Sara,

Deliberative Process / Ex. 5

Mark and I can walk through these methods at our meeting tomorrow.

Thanks, Kris

From: Pollack, Sara <sara pollack@fws.gov> Sent: Tuesday, July 16, 2019 9:24 AM

To: Garber, Kristina < Garber. Kristina@epa.gov>

Cc: Leona Laniawe <leona laniawe@fws.gov>; Karen Myers <karen myers@fws.gov>

Subject: Malathion path forward follow up

Hi Kris,

Thanks for attending the meeting last week to discuss our thoughts on a path forward to continue with the malathion BiOp.

One of the questions brought up was regarding

Deliberative Process / Ex. 5

Deliberative Process / Ex. 5

You mentioned you and others at EPA had been tossing around ideas and we had also been looking into how to approach this same question. Leona and I will be the main contacts for discussing this item, would you have some time this week to share what you and your folks had been going over?

Thursday and Friday of this week look to be the best days for Leona and myself. Let us know what works for you.

Thank You!

Sara

Sara J. Pollack, Ph.D. Environmental Contaminants Specialist U.S. Fish & Wildlife Service Ecological Services Program, MS: ES 5275 Leesburg Pike Falls Church, VA 22041-3803 703-358-2371

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Message

From: Garber, Kristina [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP

(FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=C4FBFBF6569041F4BD559765E027AA31-KRISTINA GARBER]

Sent: 3/22/2018 9:45:41 PM

To: Peck, Charles [Peck.Charles@epa.gov]; Panger, Melissa [Panger.Melissa@epa.gov]; Rossmeisl, Colleen

(Rossmeisl.Colleen@epa.gov) [Rossmeisl.Colleen@epa.gov]; Donovan, Elizabeth [Donovan.Elizabeth@epa.gov]; Blankinship, Amy [Blankinship.Amy@epa.gov]; White, Katrina [White.Katrina@epa.gov]; Connolly, Jennifer

[Connolly.Jennifer@epa.gov]; Lennartz, Steven [Lennartz.Steven@epa.gov]; 'Anderson, Brian' [anderson.brian@epa.gov]; Wendel, Christina [Wendel.Christina@epa.gov]; Harwood, Douglas

[harwood.douglas@epa.gov]

Subject: FW: Pesticide Working Group - Meeting Notes and Updated Catalog **Attachments**: Usage Data Sources.xlsx; Pesticide Working Group 3.20.2018.docx

FYI

From: Stilson, Ashley [mailto:ashley_stilson@fws.gov]

Sent: Thursday, March 22, 2018 5:20 PM

To: sheryl.kunickis@osec.usda.gov; Paisley-Jones, Claire <Paisley-Jones.Claire@epa.gov>; Shultz, Gina <gina_shultz@fws.gov>; cathy.tortorici@noaa.gov; david epstein <David.Epstein@ARS.USDA.GOV>; Perry, Tracy <Perry.Tracy@epa.gov>; elizabeth.hill2@ars.usda.gov; Sims, Diann <Sims.Diann@epa.gov>; Miller, Wynne <Miller.Wynne@epa.gov>; tony.hawkes@noaa.gov; Becker, Jonathan <Becker.Jonathan@epa.gov>; Echeverria, Marietta <Echeverria.Marietta@epa.gov>; George Noguchi <george_noguchi@fws.gov>; Nancy Golden <nancy_golden@fws.gov>; Garber, Kristina <Garber.Kristina@epa.gov>
Subject: Pesticide Working Group - Meeting Notes and Updated Catalog

Good afternoon all,

Please find attached the meeting notes from the March 20th meeting, including next week's agenda, and the updated Usage Data Catalog.

-

Ashley Stilson

Special Assistant to the Deputy Assistant Director Knauss Fellow 2018 Ecological Services U.S. Fish and Wildlife Service 5275 Leesburg Pike Falls Church, VA 22041-3803 (703) 358-2312

Message

From: Garber, Kristina [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP

(FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=C4FBFBF6569041F4BD559765E027AA31-KRISTINA GARBER]

Sent: 7/17/2019 3:46:30 PM

To: Pollack, Sara [sara_pollack@fws.gov]

CC: Leona Laniawe [leona laniawe@fws.gov]; Karen Myers [karen_myers@fws.gov]; 'Anderson, Brian'

[anderson.brian@epa.gov]; Suarez, Mark [Suarez.Mark@epa.gov]

Subject: RE: Malathion path forward follow up

Hi Sara,

Yes, we do have an approach for applying available usage data to Hawaii and Puerto Rico. We are currently writing up the methodology. I think it would be most productive if we share a description of our method and then meet. Mark Suarez is the most familiar with the available data, so, I suggest that Mark and I meet with you to discuss the method. Mark and I are available to meet on July 29 or 30. Do either of those dates work for you?

Thanks, Kris

From: Pollack, Sara <sara_pollack@fws.gov>

Sent: Tuesday, July 16, 2019 9:24 AM

To: Garber, Kristina < Garber. Kristina@epa.gov>

Cc: Leona Laniawe <leona_laniawe@fws.gov>; Karen Myers <karen_myers@fws.gov>

Subject: Malathion path forward follow up

Hi Kris,

Thanks for attending the meeting last week to discuss our thoughts on a path forward to continue with the malathion BiOp.

Deliberative Process / Ex. 5

You mentioned you and others at EPA had been tossing around ideas and we had also been looking into how to approach this same question. Leona and I will be the main contacts for discussing this item, would you have some time this week to share what you and your folks had been going over?

Thursday and Friday of this week look to be the best days for Leona and myself. Let us know what works for you.

Thank You!

Sara

Sara J. Pollack, Ph.D. Environmental Contaminants Specialist U.S. Fish & Wildlife Service Ecological Services Program, MS: ES 5275 Leesburg Pike Falls Church, VA 22041-3803 703-358-2371